

Service Manual

PIONEER
KPH - 4130/EW

KPH - 4120 EW, ES

KPH - 4120SDK/WG

ORDER NO.
CRT 1086

CASSETTE CAR STEREO WITH TUNER

DEZ. 1986

MECHANIK = CX - 166 (CRT1094)

PH-4130/KPH-4120/KPH-4120SDK

6. ADJUSTMENT

- Connection Diagram

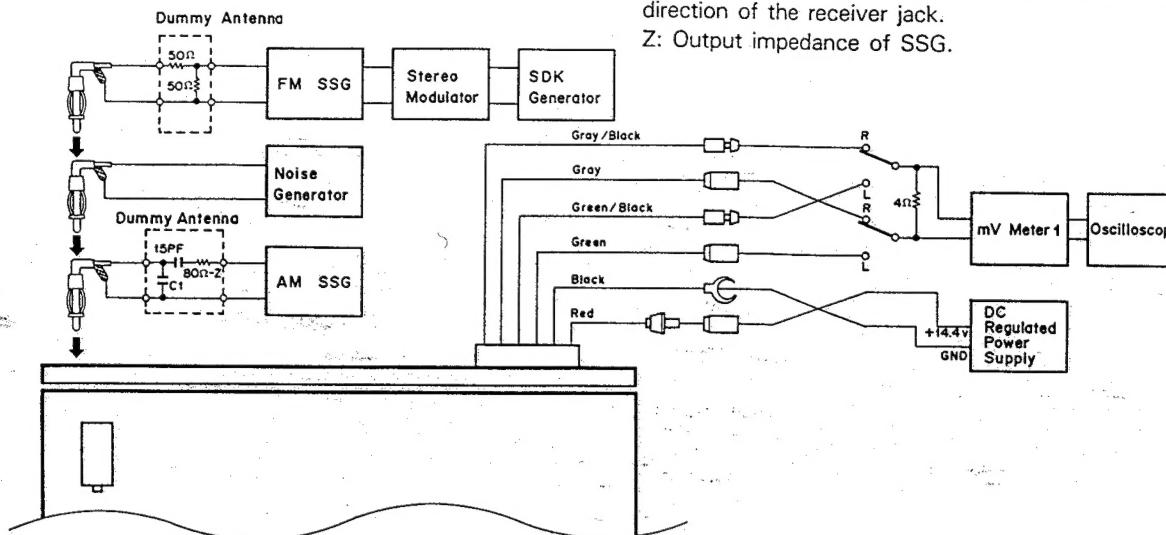


Fig. 15

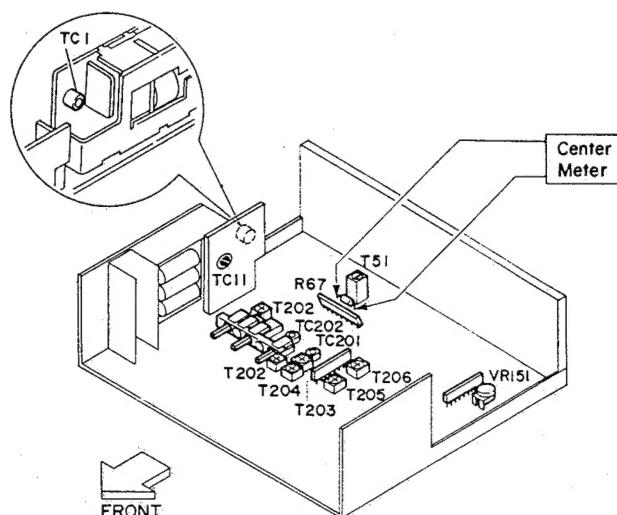


Fig. 16

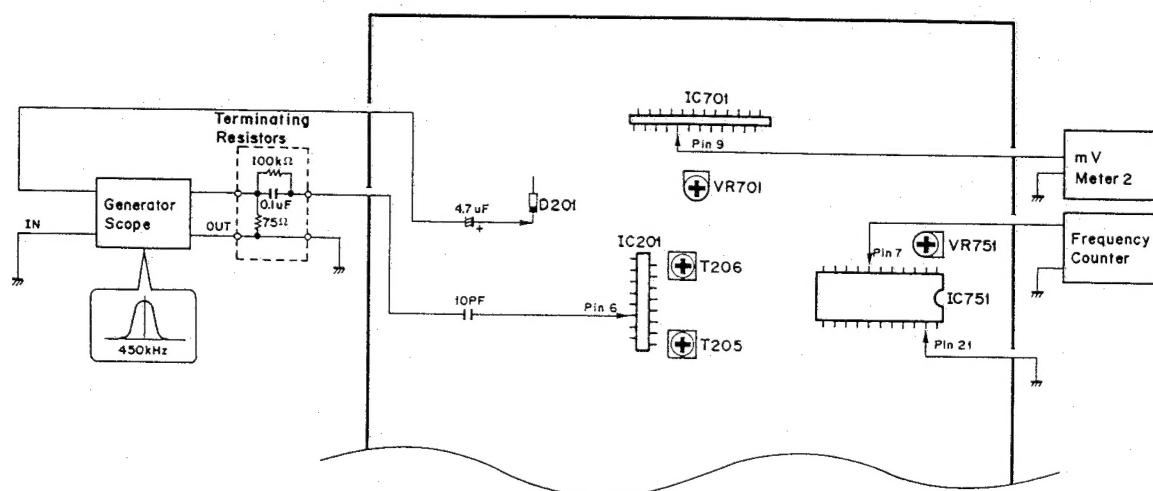


Fig. 17

NOTICE:

Select C1 so that total capacity of 80pF is attained from the direction of the receiver jack.

Z: Output impedance of SSG.

• AM IF ADJUSTMENT

	No.	Generator Scope Level (dB)	Adjusting Point	Adjustment Method (Switch Position)
IF	1	Select a low range where U curve appears.	T205, 206	Make U curve symmetrical and its amplitude the maximum.

• AM (MW) TRACKING ADJUSTMENT

	No.	AM SSG (400 Hz, 30%)		Pointer Position	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (kHz)	Level dB (μ V)			
Tracking	1	515	20	Minimum	T203	mV Meter 1: Maximum
	2	1,650	20	Maximum	TC201	mV Meter 1: Maximum
	3	Repeat No.1-2 alternately so that the mV Meter 1 indicates the maximum output.				
	4	1,400	20	Tune to 1,400 kHz	TC1, TC202	mV Meter 1: Maximum

• AM (LW) TRACKING ADJUSTMENT (KPH-4130/EW)

	No.	AM SSG (400 Hz, 30%)		Pointer Position	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (kHz)	Level dB (μ V)			
Tracking	1	140	40	Minimum	T204	mV Meter 1: Maximum
	2	290	40	Maximum	T202	mV Meter 1: Maximum
	3	Repeat No.1-2 alternately so that the mV Meter 1 indicates the maximum output.				
	4	215	40	Tune to 215 kHz	T201	mV Meter 1: Maximum

• FM ADJUSTMENT *1 Noise Generator *2 Stereo MOD.: 1 kHz, L+R=90%, Pilot = 10%

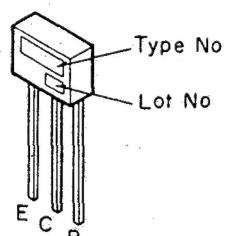
	No.	FM SSG (400 Hz, 100%)		Pointer Position	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (MHz)	Level dB (μ V)			
IF	1	*1		No Care	T51	Center Meter: 0
Tracking	2	87.0 (EW,ES)	10	Minimum	TC11 (Front End)	mV Meter 1: Maximum
		87.5 (SDK/WG)	10			
	3	87.2 (SDK/WG)	10	Minimum	_____	87.2 MHz can not be received
	4	108.5 (EW,ES)	10	Maximum	_____	108.5 MHz can be received
		107.5 (SDK/WG)	10			107.5 MHz can be received
ARC	5	108.3 (SDK/WG)	10	Maximum	_____	108.3 MHz can not be received
ARC	1	98.0*2	32	Tune to 98.0 MHz	VR151	mV Meter 1: Separation 5 dB (MONO SWITCH: AUTO)

• SDK ADJUSTMENT *3 SDK MOD.: 400 Hz, L+R=60%, 57 kHz (SK)=5%, 125 Hz (DK)=30%

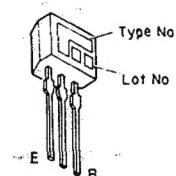
	No.	FM SSG *3		Pointer Position	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (MHz)	Level dB (μ V)			
SK	1	98.0	60	Tune to 98.0 MHz	VR701	mV Meter 2: Maximum SDK SWITCH: OFF
DK	1	98.0	60	Tune to 98.0 MHz	VR751	Frequency Counter: 125 ± 1 Hz SDK Switch: ON, Ground IC751 pin 21.

• ICs and Transistors

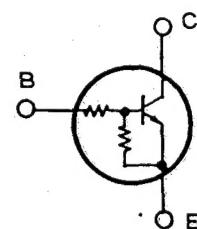
UN4223



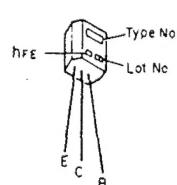
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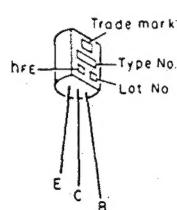
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DTC114ES



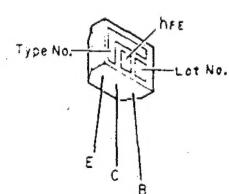
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2SC2458
2SC3113



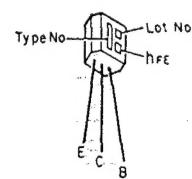
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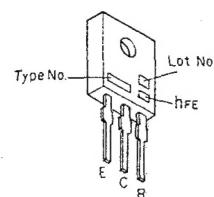
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2SC536SP
2SD1012



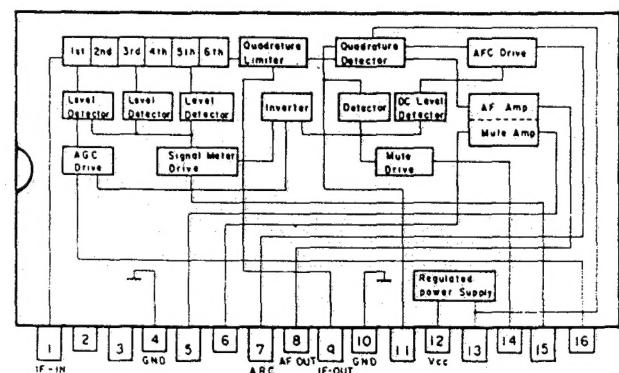
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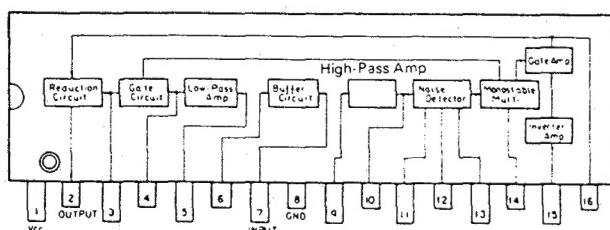
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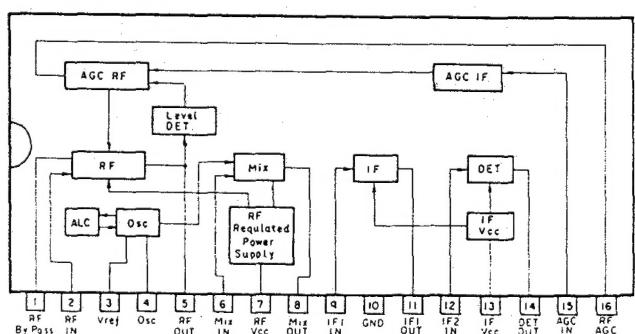
LA1140B



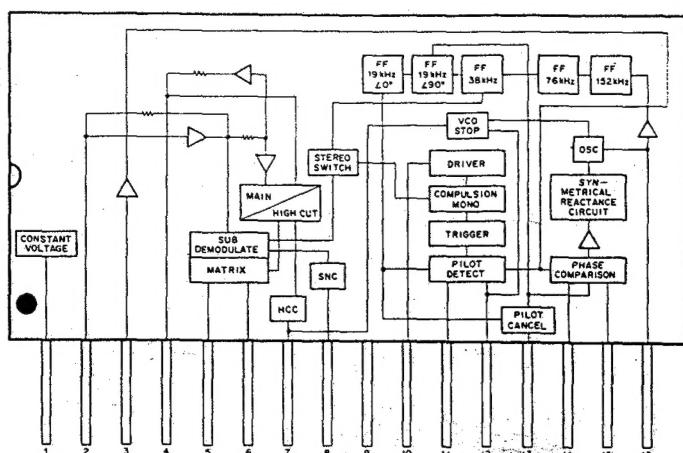
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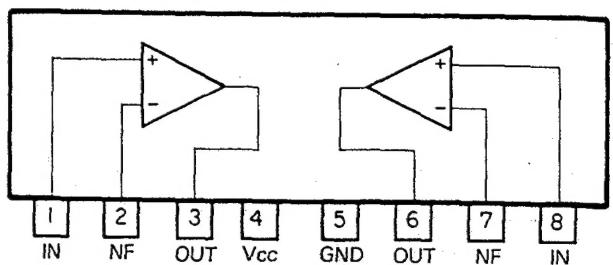
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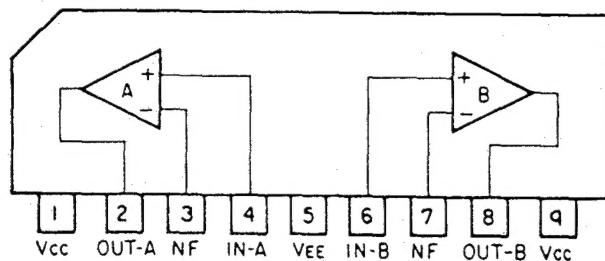
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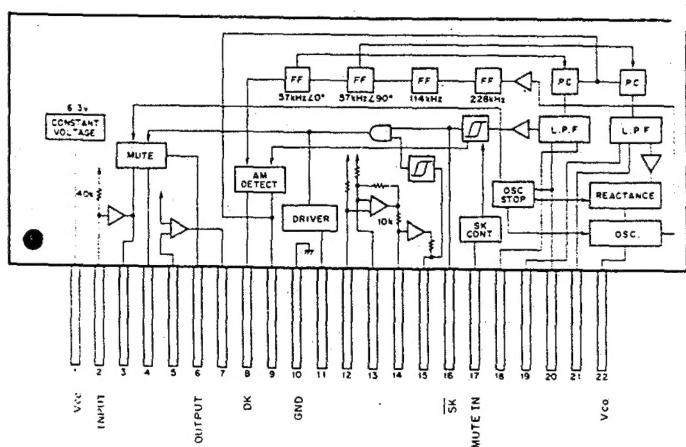
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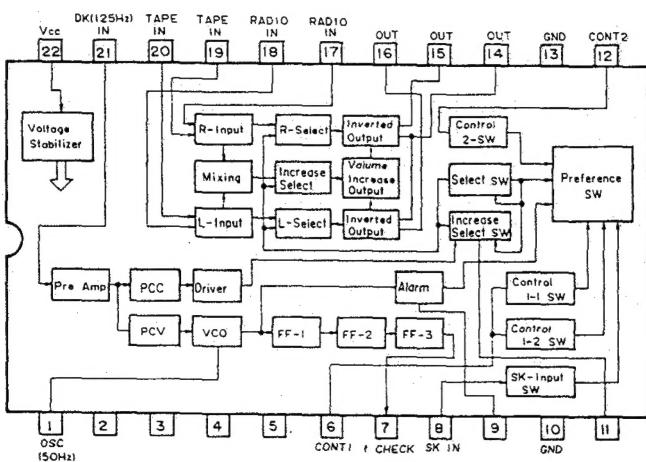
TA75558S



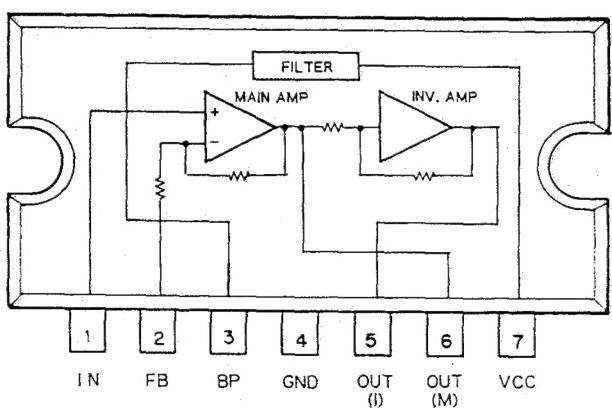
LA2220



LA2211

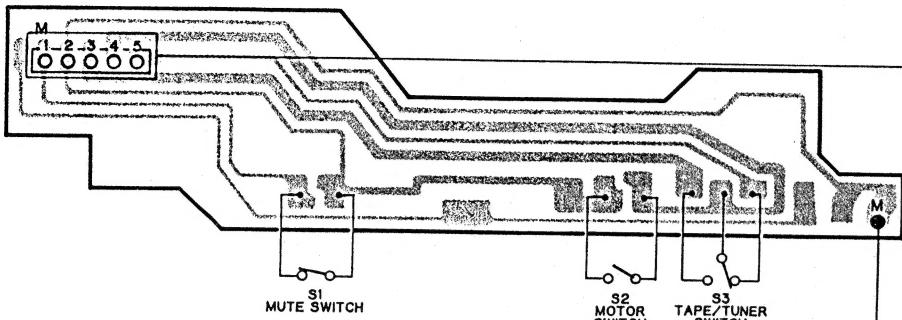


MB3732

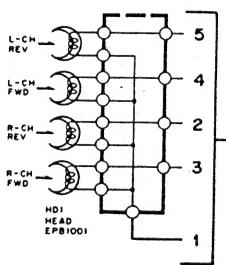


7. CONNECTION DIAGRAM (KPH-4130/EW)

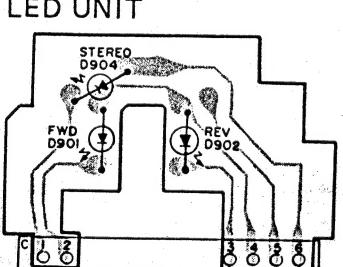
A SWITCH P.C. BOARD



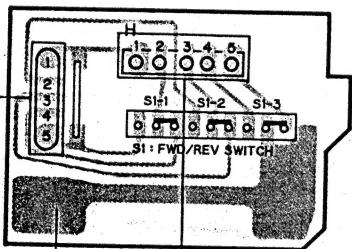
B



C



P.C. BOARD UNIT



TUNER P.C. BOARD

IC, Q ADJ	IC251 VR151	IC101 Q451	Q452	IC201	T206 T205	T203 TC201 T204	TC202	T51	T202	Q52 Q51	Q201 Q605	Q202 Q605	Q604 Q606 Q602 Q603 Q601
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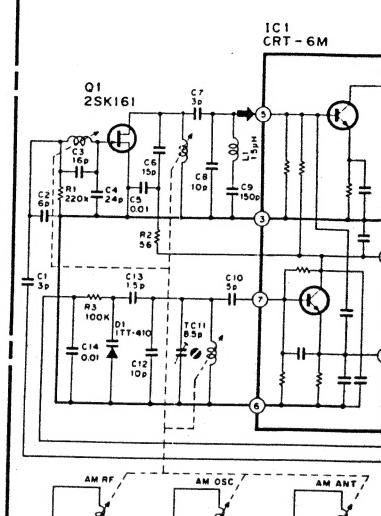
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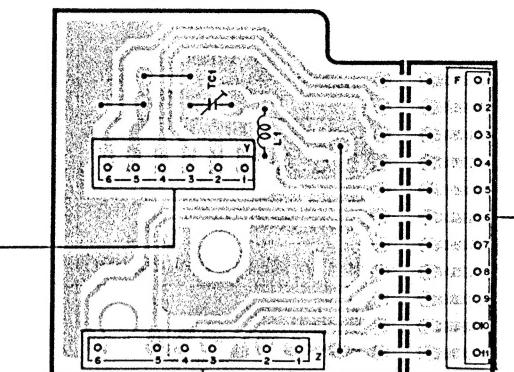
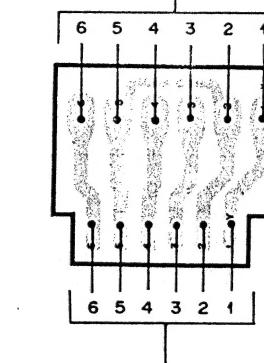
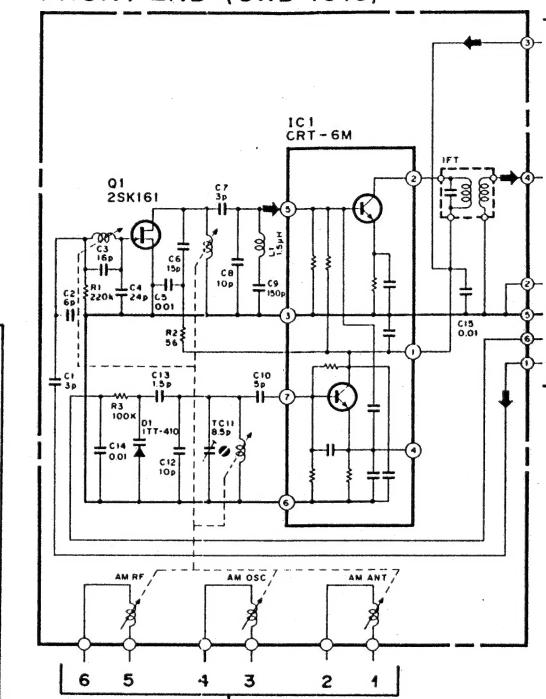
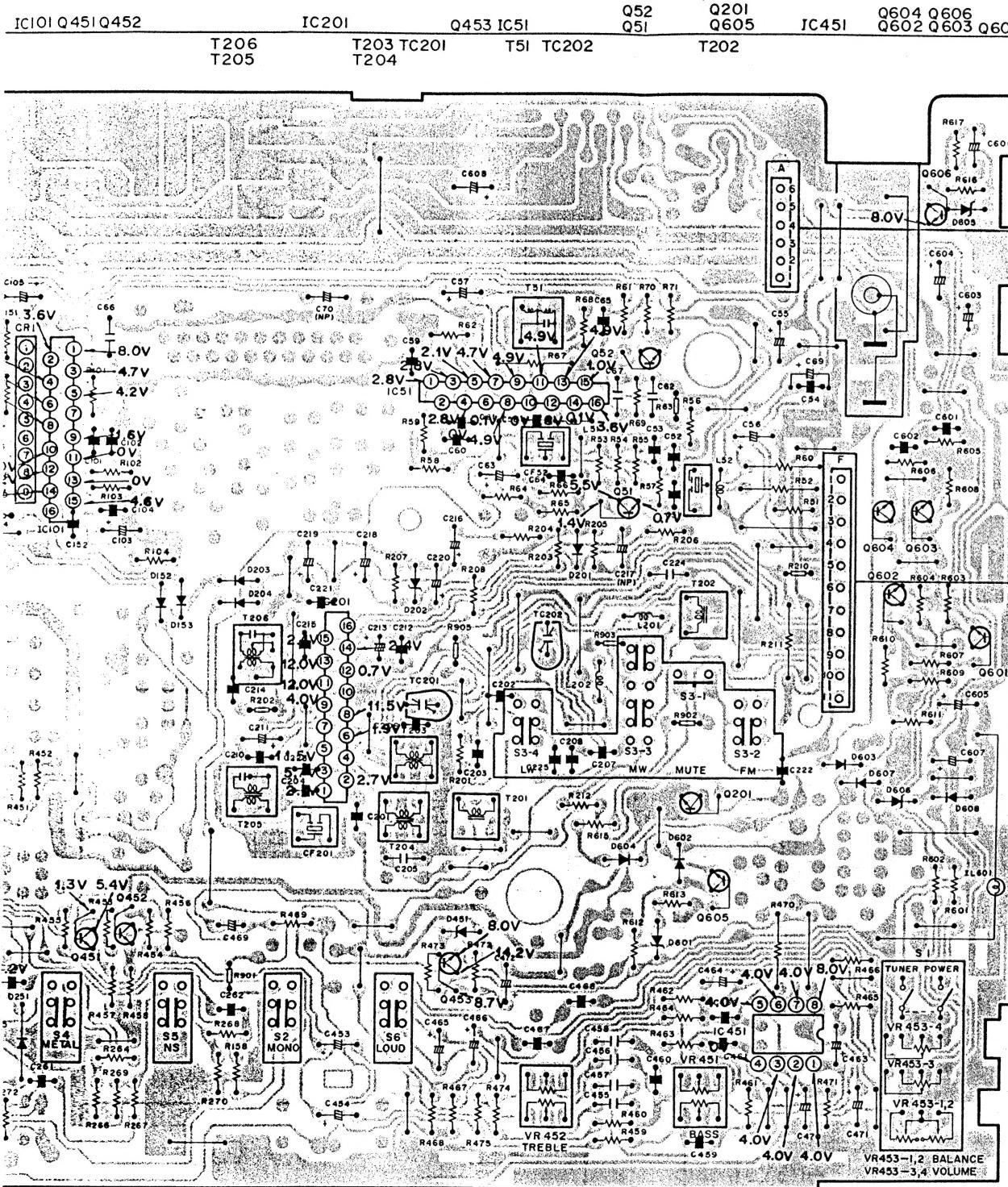
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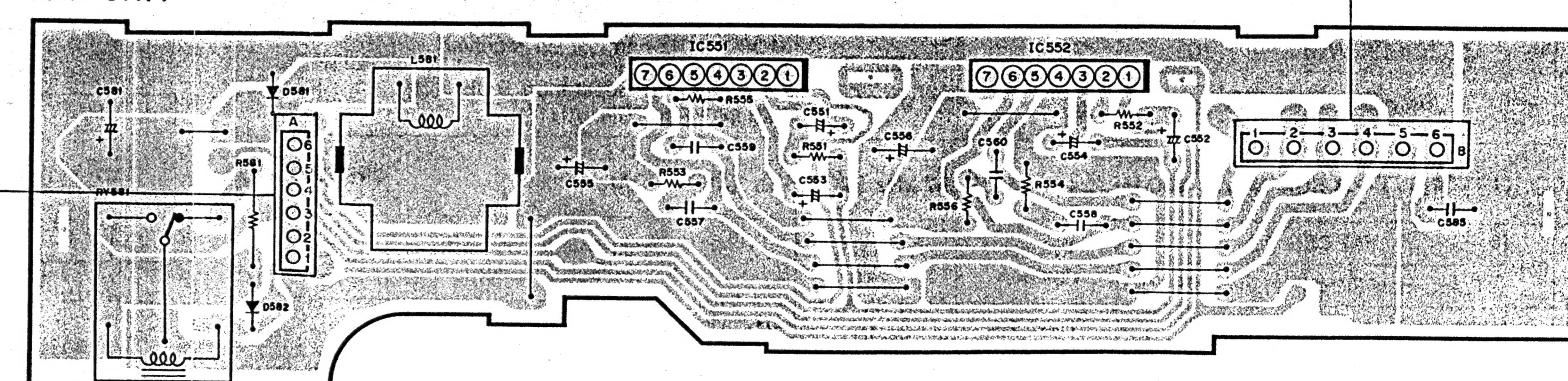
FRONT END (CWB 1015)





AMP UNIT

	1	2	3	4	5	6
IC552, IC551	3.1V	3.1V	3.1V	0V	6.2V	6.2V



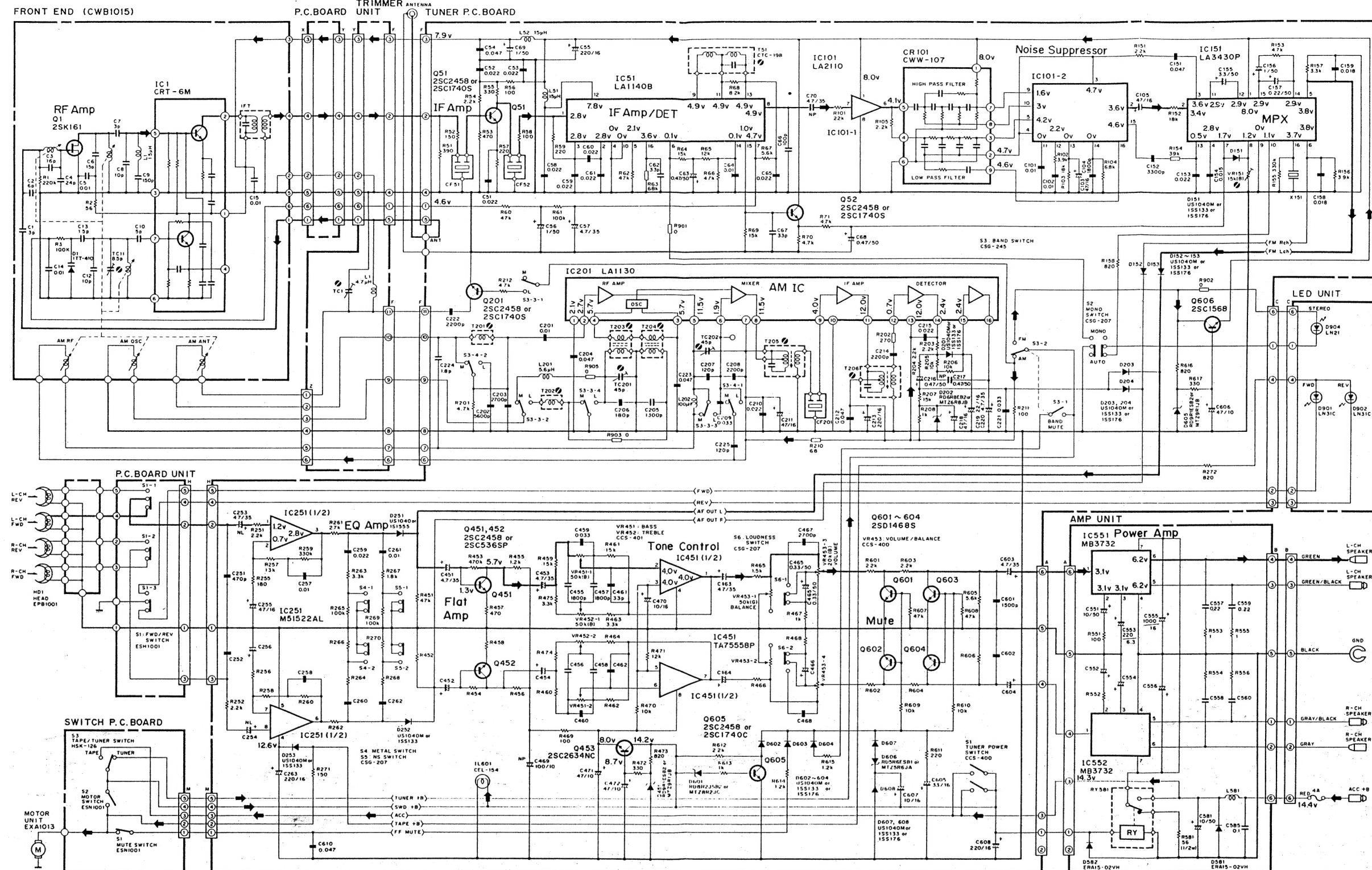
A

B

C

D

8. SCHEMATIC CIRCUIT DIAGRAM (KPH-4130/EW)



NOTE:

chip resistor
chip capacitor

SWITCHES

TUNER P.C. BOARD

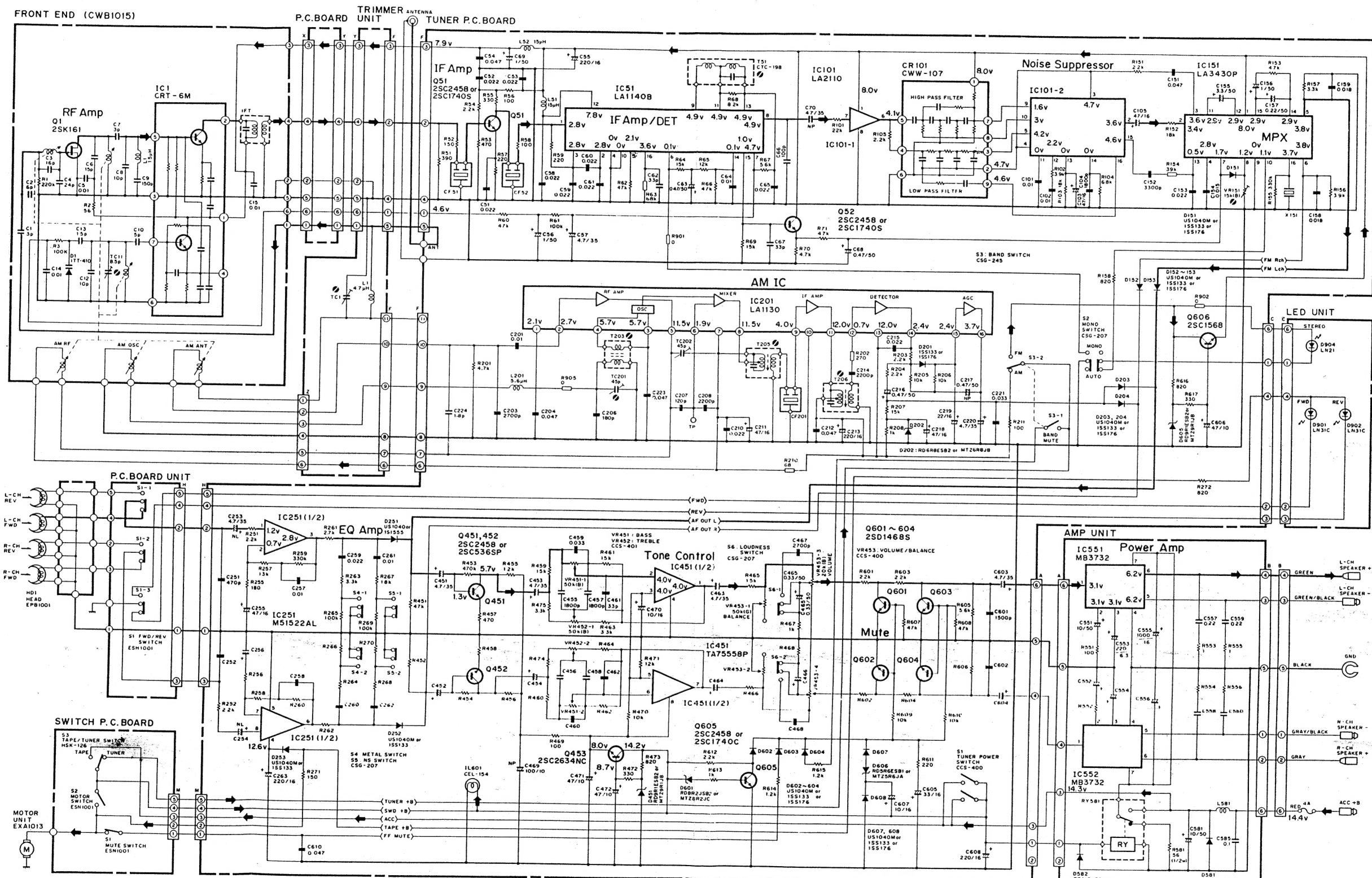
S1: TUNER POWER SWITCH	.....	ON-OFF
S2: MONO SWITCH	.....	AUTO-MONO
S3: BAND SWITCH	.....
S3-1: MUTE SWITCH	.....	ON-OFF
S3-2: FM SWITCH	.....	FM-AM

SWITCH P.C. BOARD

S1: MUTE SWITCH	.....	ON-OFF
S2: MOTOR SWITCH	.....	ON-OFF
S3: TAPE/TUNER SWITCH	.....	TAPE-TUNER

The underlined indicates the switch position.

9. SCHEMATIC CIRCUIT DIAGRAM(KPH-4120/EW,ES)



1

2

3

4

5

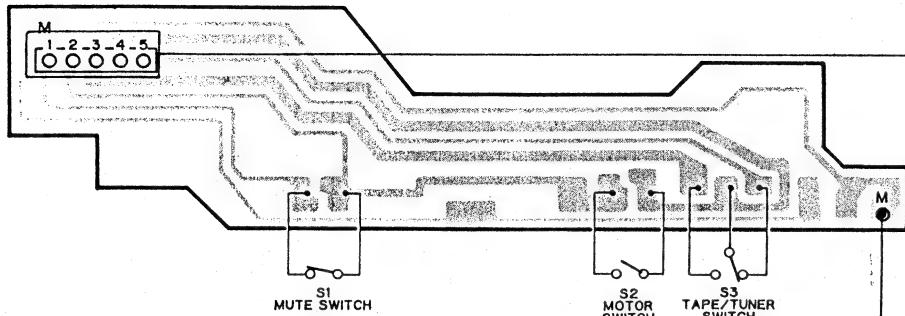
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10. CONNECTION DIAGRAM (KPH-4120/EW,ES)

TUNER P.C. BOARD

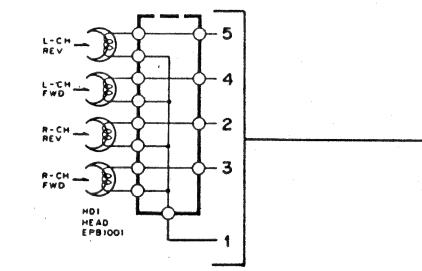
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A SWITCH P.C. BOARD



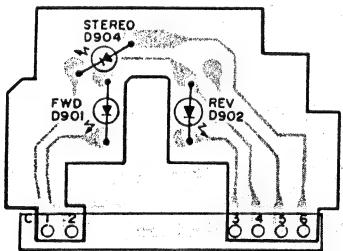
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MOTOR UNIT

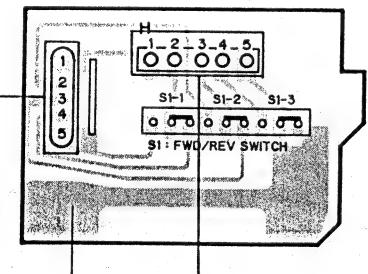


C

LED UNIT



P.C. BOARD UNIT



TUNER P.C. BOARD

IC,Q ADJ	IC25I VR151	IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC10I Q451 Q452	IC20I T206 T205	Q453 T203 TC20I	IC5I T5I TC202	Q52 Q51	Q605 JC45I	Q604 Q606 Q602 Q603 Q601
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IC20I<br

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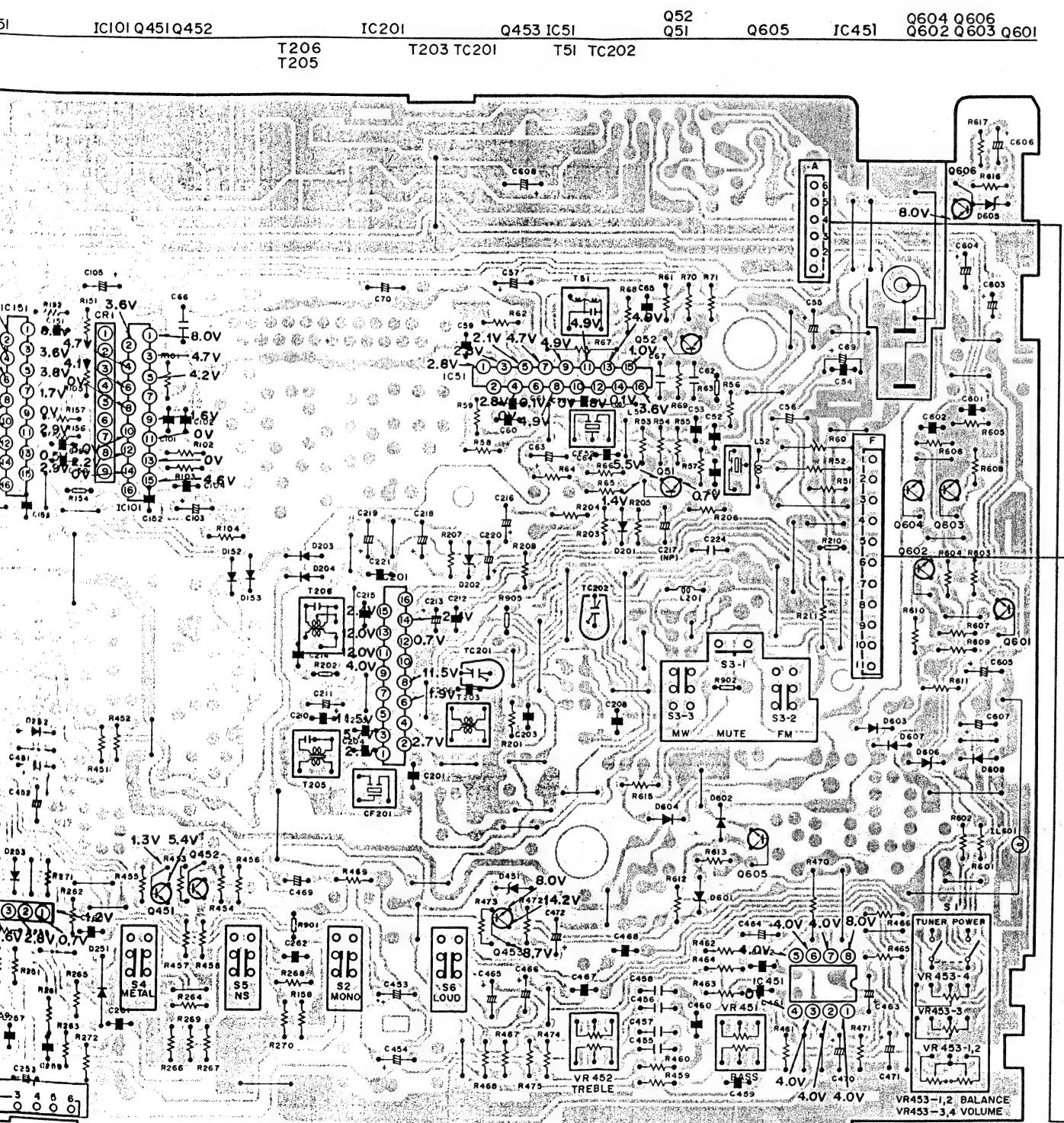
6

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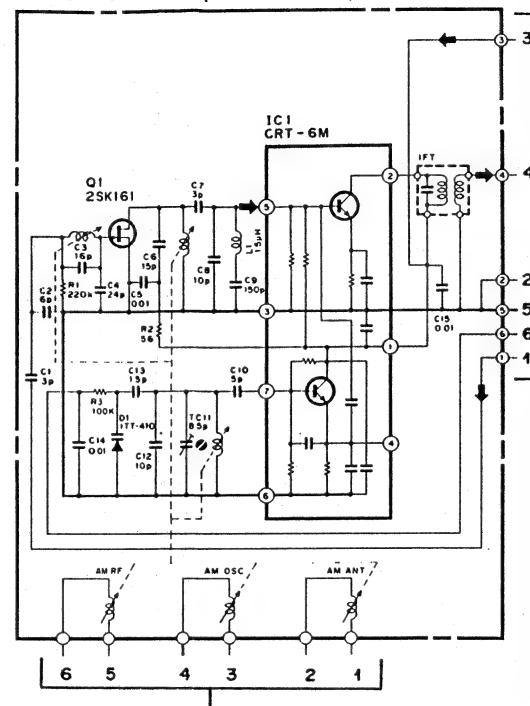
3

KPH-4130/KPH-4120/KPH-4120SDK

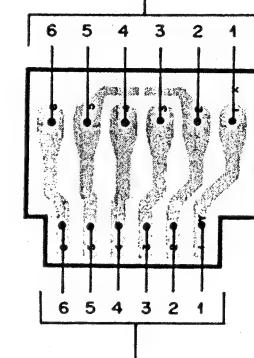
ARD



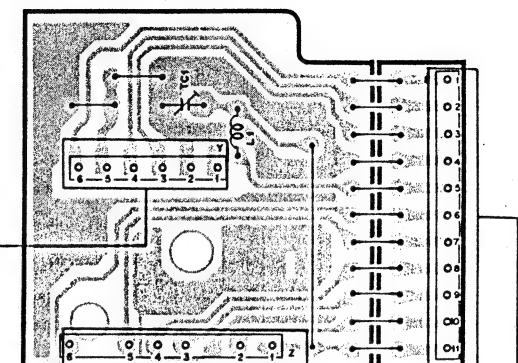
FRONT END (CWB 1015)



P.C. BOARD



TRIMMER UNIT



AMP UNIT

	1	2	3	4	5	6
IC552, IC551	3.1V	3.1V	3.1V	0V	6.2V	6.2V

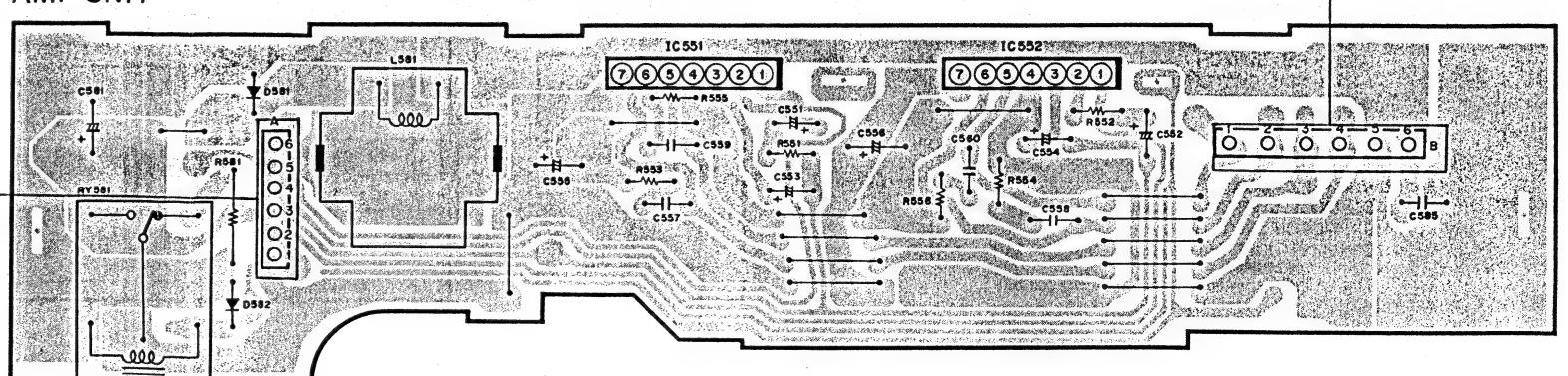


Fig. 21

4

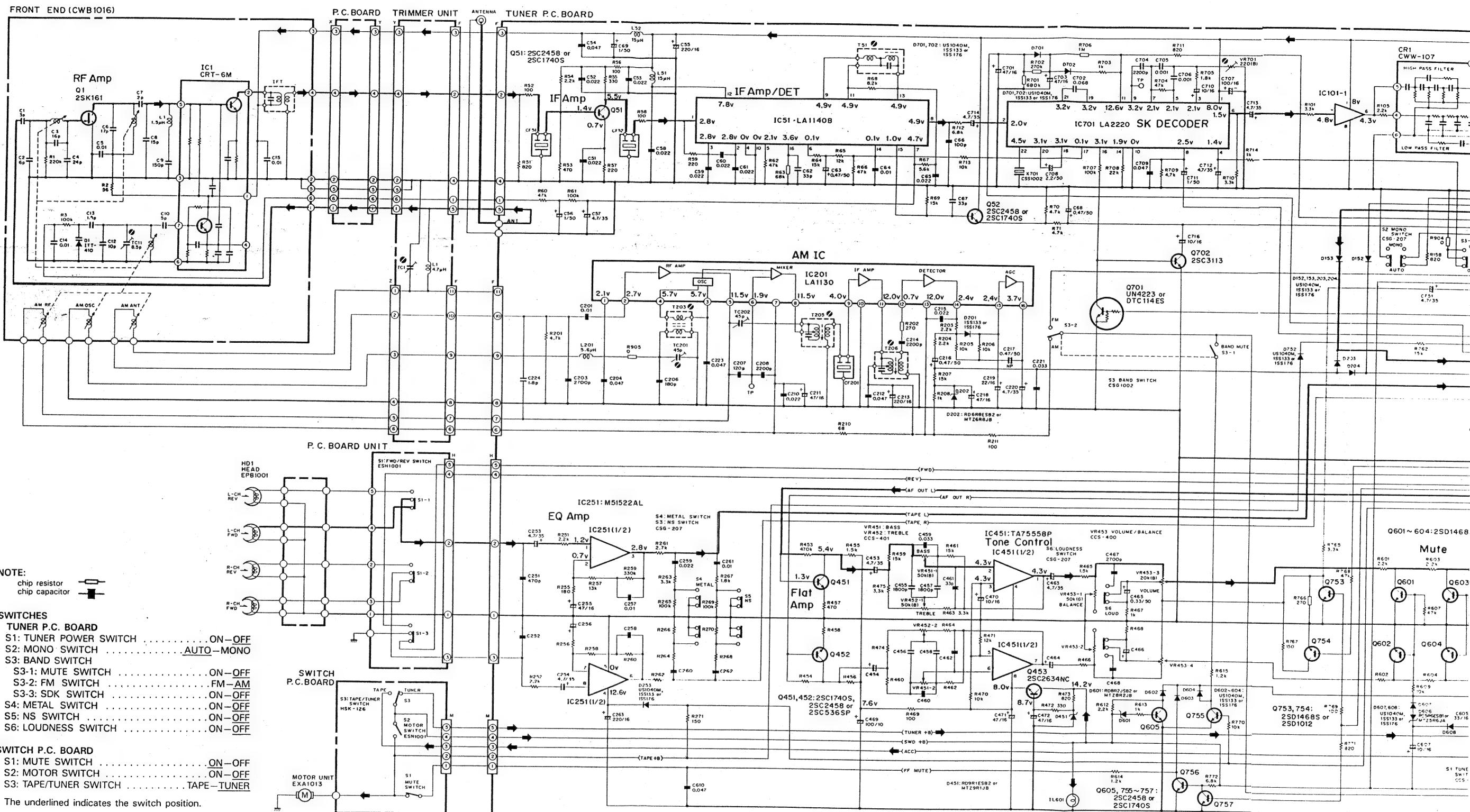
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11. SCHEMATIC CIRCUIT DIAGRAM (KPH-4120SDK/WG)



4

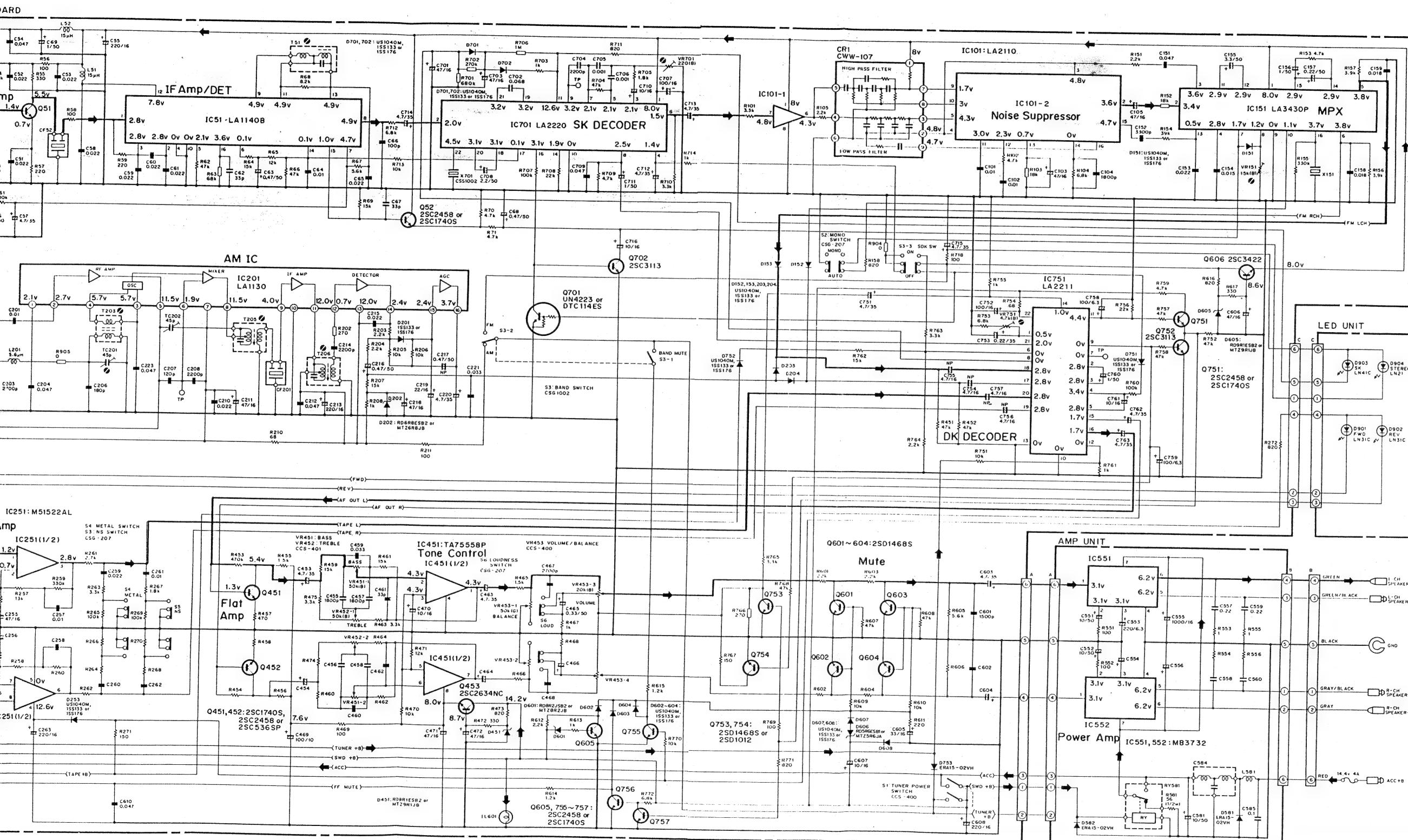
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A

B

C

D

Fig. 22

4

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4

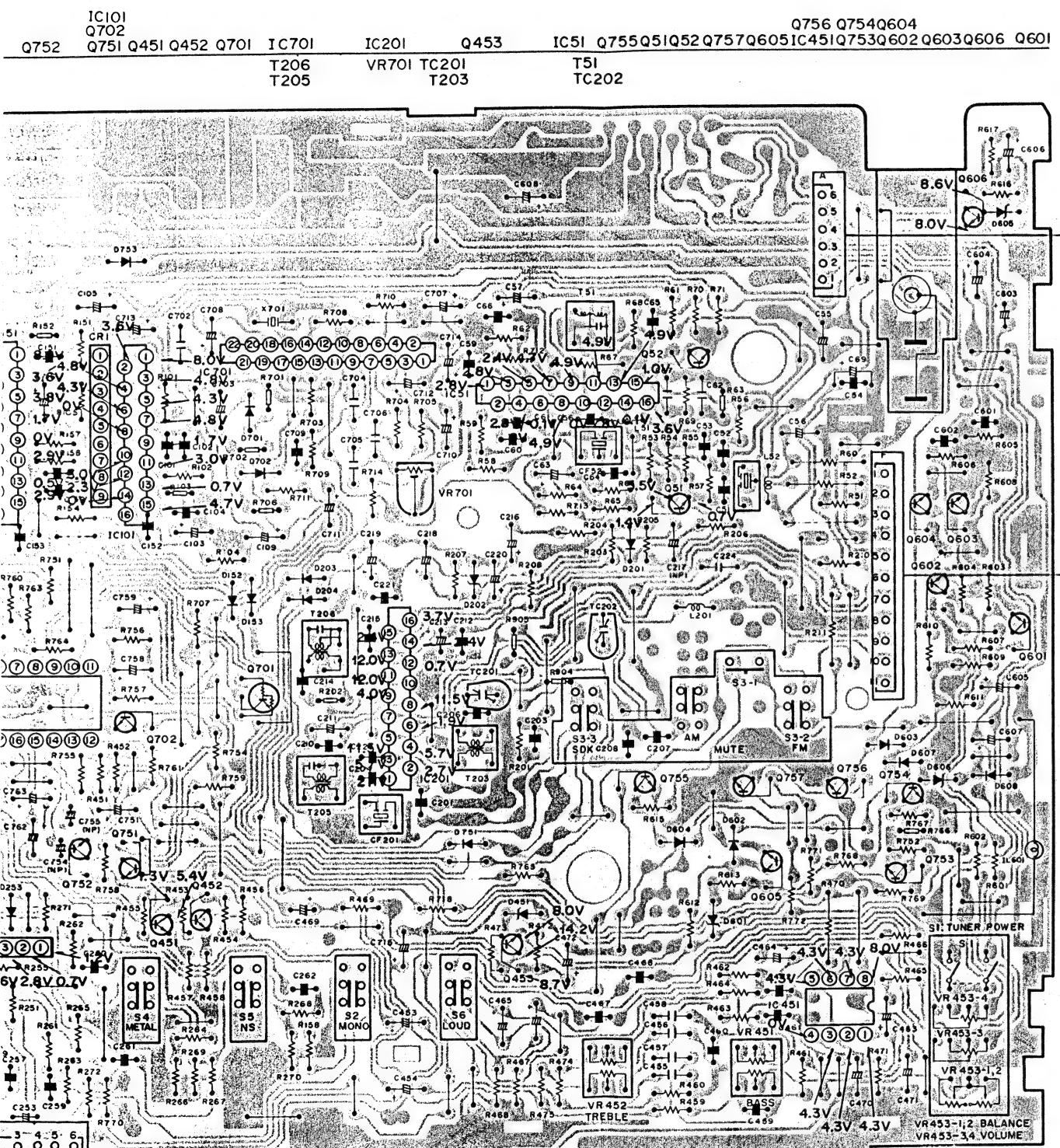
5

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RD



13. EXPLODED VIEW

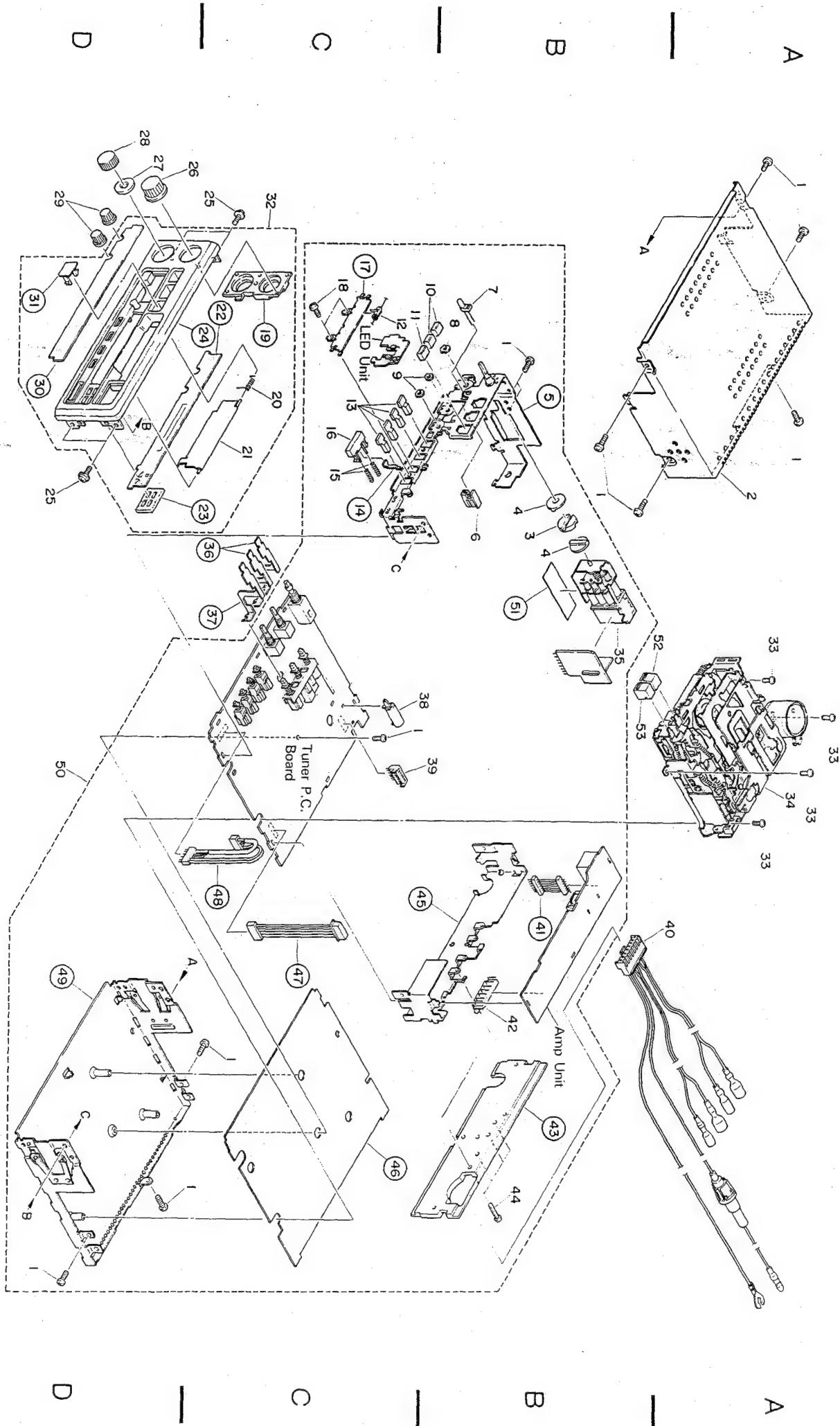


Fig. 24

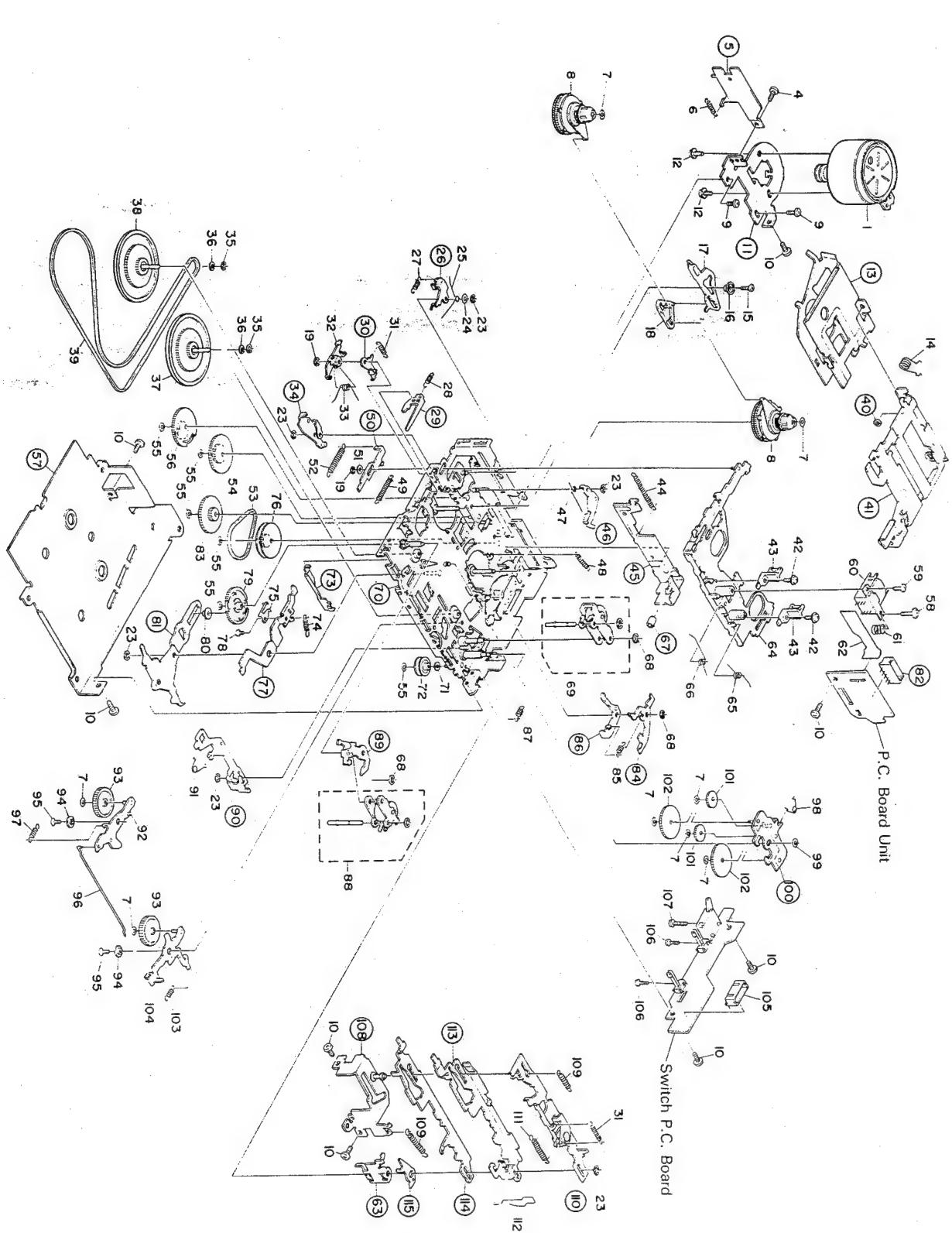
• Parts List

NOTE:

- For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.
- ★★: GENERALLY MOVES FASTER THAN ★.
This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- Parts whose parts numbers are omitted are subject to being not supplied.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
	1.	BMZ30P050FMC	Screw	★	29.	CAA1070	Knob (BASS, TREBLE)
	2.	CNB1127	Case		30.		Scale (KPH-4130/EW)
	3.	CNW-101	Coupler B				Scale (KPH-4120/EW,ES)
	4.	CNW-100	Coupler A				Scale (KPH-4120SDK/WG)
	5.		Holder Unit		31.		Cap (KPH-4120/EW,ES)
★★	6.	CNV1320	Guide		32.	CXA1514	Grille Assy (KPH-4130/EW)
★★	7.	CEL-154	Lamp		CXA1512	Grille Assy (KPH-4120/EW,ES)	
★★	8.	CBA-067	Nut		CXA1516	Grille Assy (KPH-4120SDK/WG)	
★★	9.	CBA-066	Nut	●	33.	BMZ26P050FMC	Screw
★	10.	CAC-908	Button (BAND)	●	34.	EXK1140	Cassette Mechanism Assy
★	11.	CAC-908	Button (BAND) (KPH-4130/EW)		35.	CWB1015	Front End (KPH-4130/EW,
★		CAC-909	Button (BAND) (KPH-4120SDK/WG)			CWB1016	KEH-4120/EW,ES)
★	12.	CAF-071	Pointer		36.		Front End (KPH-4120SDK/WG)
★	13.	CAC-913	Button (NS, METAL, MONO, LOUD)		37.		Lever
	14.		Lever				Lever (KPH-4130/EW,
	15.	CBH1085	Spring		38.	CKX1002	KPH-4120SDK/WG)
★	16.	CAC1293	Button		39.	HKS-176	Antenna Jack
★	17.		Holder		40.	CDE1417	Connector
★	18.	BMZ26P030FMC	Screw		41.		Cord Assy
	19.		Lens		42.	CKS-463	Plug
	20.	CBH-875	Spring		43.		Heat Sink
	21.	CAT1048	Door		44.	BMZ26P100FMC	Screw
	22.		Sheet (KPH-4130/EW, KPH-4120/EW,ES)		45.		Holder
			Sheet (KPH-4120SDK/WG)		46.		Insulator
	23.		Cushion		47.		Connector
	24.		Grille (KPH-4130/EW)		48.		Connector
			Grille (KPH-4120/EW,ES)		49.		Chassis Unit
			Grille (KPH-4120SDK/WG)	●	50.	CWM1225	Tuner Amp Assy (KPH-4130/EW)
★	25.	PMZ30P050FMC	Screw	●		CWM1224	Tuner Amp Assy (KPH-4120/EW,ES)
★	26.	CAA1061	Knob (TUNING)	●		CWM1226	Tuner Amp Assy (KPH-4120SDK/WG)
★	27.	CAA1062	Knob (BALANCE)		51.		Insulator
★	28.	CAA1063	Knob (VOLUME)	★	52.	CAC1353	Button (◀◀)
				★	53.	CAC1352	Button (▶▶)

14. CASSETTE MECHANISM ASSY



• Parts List

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
★ ★	1.	EXA1013	Motor Assy	★ ★	59.	BMZ20P040FMC	Screw
	2,3.	VACANT			60.	EPB1001	Head
	4.	BMZ20P025FMC	Screw		61.	CBH-198	Spring
	5.		Holder		62.	ENP1003	P.C. Board
	6.	EBH1011	Spring		63.		Arm
★ ★	7.	CBF-166	Washer		64.	EXA1004	Head Base Unit
	8.	EXA1012	Reel Unit		65.	EBH1004	Spring
	9.	BMZ23P030FMC	Screw		66.	EBH1003	Spring
	10.	BSZ23P040FMC	Screw		67.		Cushion
	11.		Bracket		68.	YE20FUC	Washer
	12.	PMS26P025FUC	Screw		69.	EXA1002	Roller Unit
	13.		Cassette Holder		70.		Chassis Unit
	14.	EBH1019	Spring		71.	EBF1004	Washer
	15.	EBA1002	Screw		72.	ENV1009	Pulley
	16.	ELA1019	Collar		73.		Lever
B	17.	ENV1022	Arm		74.	EBH1025	Spring
	18.	ENV1021	Arm		75.	EBL1001	Spring
	19.	YE12FUC	Washer		76.	ENV1010	Pulley
	20-22.	VACANT			77.		Arm
	23.	YE15FUC	Washer		78.	HBA-147	Screw
	24.	CBF-165	Washer		79.	ENV1015	Gear
	25.	EBH1035	Spring		80.	ELA1018	Collar
	26.		Arm		81.		Arm
	27.	EBH1037	Spring		82.		Plug
	28.	EBH1039	Spring		83.	ENV1011	Gear
	29.		Arm		84.		Arm
	30.		Arm		85.	EBH1024	Spring
	31.	EBH1010	Spring		86.		Ratchet
	32.		Arm		87.	EBH1018	Spring
	33.	EBH1008	Spring	★ ★	88.	EXA1003	Roller Unit
C	34.		Arm Unit		89.		Arm
	35.	CBG1001	Washer		90.		Lever
	36.	HBF-179	Washer		91.	EBH1013	Spring
	37.	ENV1019	Flywheel(N)		92.	EXA1006	Arm Unit
	38.	ENV1020	Flywheel(R)		93.	EXA1020	Gear Unit
★ ★	39.	CNT-091	Belt		94.	ELA1032	Collar
	40.		Roller		95.	HBA-212	Screw
	41.		Cassette Frame Unit		96.	EBH1007	Spring
	42.	PMS20P040FMC	Screw		97.	EBH1006	Spring
	43.	ENV1016	Tape Guide		98.	EBH1014	Spring
	44.	EBH1020	Spring		99.	CBF1001	Washer
	45.		Lever		100.		Arm Unit
	46.		Arm		101.	ENV1018	Gear
	47.	EBH1040	Spring		102.	ENV1017	Gear
	48.	EBH1041	Spring		103.	EBH1022	Spring
D	49.	EBH1021	Spring		104.	EXA1005	Arm Unit
	50.		Lever		105.		Plug
	51.	EBC1001	Washer		106.	EBA1006	Screw
	52.	EBH1009	Spring		107.	BMZ20P070FUC	Screw
	53.	ENT1002	Belt		108.		Bracket Unit
	54.	ENV1012	Gear		109.	EBH1016	Spring
	55.	CBF-135	Washer		110.		Lever Unit
	56.	ENV1014	Gear		111.	EBH1017	Spring
	57.		Cover		112.	EBH1005	Spring
	58.	EBA1007	Screw		113.		Lever
					114.		Lever
					115.		Arm

KPH-4130/KPH-4120/KPH-4120SDK

15. ELECTRICAL PARTS LIST

NOTE:

When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	56×10^3	561	.....	RD1/4PS 5 6 1 J
47kΩ	47×10^3	473	.....	RD1/4PS 4 7 3 J
0.5Ω	0R5	.....	.....	RN2H 0 R 5 K
1Ω	010	.....	.....	RS1P 0 1 0 K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).
5.62kΩ 562×10^3 RN1/4SR 5 6 2 1 F

- For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.

★★: GENERALLY MOVES FASTER THAN ★.

This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/8S□□□J, RS1/10S□□□J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

Tuner P.C. Board (KPH-4130/EW)

MISCELLANEOUS

Mark	Symbol & Description	Part No.	Mark	Description	No.
★★ IC51		LA1140B	★ D606		MTZ9R1JB RD5R6ESB1 or MTZ5R6JA
★★ IC101		LA2110	L51, 52	Inductor	LAU150K
★★ IC151		LA3430P	L201	FERRI-INDUCTOR	LAU5R6K
★★ IC201		LA1130	L202	FERRI-INDUCTOR	LAU101K
★★ IC251		M51522AL	T51	COIL	CTC1008
★★ IC451		TA75558P	T201	COIL	CTB-147
★★ Q51, 52, 201, 605		2SC2458 or 2SC1740S	T202	COIL	CTB-148
★★ Q451, 452		2SC2458 or 2SC536SP	T203	COIL	CTB-146
★★ Q453		2SC2634NC	T204	COIL	CTB-145
★★ Q601 - 604		2SD1468S	T205	COIL	CTE-150
★★ Q606		2SC1568	T206	IFT	CTE-149
★ D151 - 153, 201, 203, 204, 252, 253, 602 - 604, 607, 608		US1040M or 1SS133 or	CF51, 52	CERAMIC FILTER	CTF-152 CTF-217
★ D202		1SS176 RD6R8ESB2 or MTZ6R8JB	CF201	FILTER	CTF-100 CTF-240
★ D251		US1040 or 1S1555	CR101 TC201, 202	TRIMMER	CWW-107 CCG-087
★ D451		RD9R1ESB2 or MTZ9R1JB	★★ VR151	SEMI-FIXED, 15 kΩ(B)	CCP-246
★ D601		RD8R2JSB2 or MTZ8R2JC	★★ VR451, 452	VOLUME, 50 kΩ(B), (BASS, TREBLE)	CCS-401
★ D605		RD9R1ESB2 or	★★ VR453/S1	VOLUME/SWITCH, 20 kΩ(B), 50 kΩ(G), (VOLUME, BALANCE/	CCS-400
				TUNER POWER)	

Mark	Symbol & Description	Part No.	Mark	Symbol & Description	Part No.
★ ★ S2, 4 – 6	Switch (MONO, METAL, NS, LOUD)	CSG-207	C225		CCSSL121J50
★ ★ S3	Switch (BAND)	CSG-245	C251, 252		CKSYB471K50
★ ★ IL601 X151	Lamp, 14 V 40 mA Ceramic, Resonator	CEL-154 CSS1019	C253, 254		CEANL4R7M35LL
			C255, 256		CEA470M16LS
			C257, 258		CKSYB103K50
RESISTORS					
Mark	Symbol & Description	Part No.			
R52, 60, 67, 211, 470		RD1/4PM□□□J	C259, 260		CKSYB223K50
R63, 154, 202, 210, 901 – 903, 905		RS1/8S□□□J	C261, 262		CKSYB103K50
Other Resistors		RD1/4PS□□□JL	C263		CEA221M16L2
			C451 – 454, 463, 464		CEA4R7M35LS
			C455 – 458		CKPYX182M16L
CAPACITORS					
Mark	Symbol & Description	Part No.			
C51 – 53, 58 – 61, 65		CKSYB223K50	C459, 460		CKSYB333K25
C54		CKSYF473Z50	C461, 462		CCSSL330J50
C55		CEA221M16L2	C465, 466		CEAR33M50LS2
C56, 69		CEA010M50LS2	C467, 468		CKSYB272K50
C57		CEA4R7M35L2	C469		CEA101M10L2
C62, 67		CCPSL330J50L	C470		CEA100M16LS2
C63, 68		CEAR47M50LS2	C471, 472		CEA470M16LS
C64		CKSYB103K50	C601, 602		CKSYB152K50
C66		CKPYB101K50L	C603, 604		CEA4R7M35L
C70		CEA4R7M35NPLL	C605		CEA330M10L2
C101, 102		CKSYB103K50	C606		CEA470M16LS
C103		CEA470M16LS	C607		CEA100M16LS2
C104		CKSYB182K50	C608		CEA221M16L2
C105		CEA470M16L2	C610		CKSYF473Z50
C151		CKSYF473Z50	Tuner P.C. Board (KPH-4120/EW,ES)		
C152		CKSYB332K50	MISCELLANEOUS		
C153		CKSYB223K50	Mark	Symbol & Description	Part No.
C154		CKSYB153K	★ ★ IC51		LA1140B
C155		CEA3R3M50LS	★ ★ IC101		LA2110
C156		CEA010M50LS2	★ ★ IC151		LA3430P
C157		CSZAR22M50	★ ★ IC201		LA1130
C158, 159		CKSYB183K50	★ ★ IC251		M51522AL
C201		CKSYB103K50	★ ★ IC451		TA75558P
C202		CKSYB562K50	★ ★ Q51, 52, 605		2SC2458 or
C203		CKSYB272K50	★ ★ Q451, 452		2SC1740S
C204, 212, 223		CKSYF473Z50	★ ★ Q453		2SC2634NC
C205		CQPA132J100	★ ★ Q601 – 604		2SD1468S
C206		CCSSH181J50	★ ★ Q606		2SC1568
C207		CCSPH121J50	★ D151 – 153, 201, 203, 204, 252,		US1040M or
C208, 214		CKSYB222J50	253, 602 – 604, 607, 608		1SS133 or
C209, 221		CKSYB333K25	★ D202		1SS176
C210, 215		CKSYB223K50	★ D251		RD6R8ESB2 or
C211, 218		CEA470M16LS	★ D451		MTZ6R8JB
C213		CEA221M16L2	★ D601		US1040 or
C216		CEAR47M50LS2	★ D605		1S1555
C217	0.47 µF/50 V (NP)	CCH-108			
C219		CEA220M16LS			
C220		CEA4R7M35LS			
C222		CKSYB222J50			
C224		CCPCH1R8M50L			

A

B

C

D



Mark	Symbol & Description	Part No.	Mark	Symbol & Description	Part No.
★ D606		RD5R6ESB1 or MTZ5R6JA	C151		CKSYF473Z50
L51, 52	Inductor	LAU150K	C152		CKSYB332K50
L201	Ferri-Inductor	LAU5R6K	C153		CKSYB223K50
T51	Coil	CTC1008	C154		CKSYB153K50
			C155		CEA3R3M50LS
T203	Coil	CTB-146	C156		CEA010M50LS2
T205	Coil	CTE-150	C157		CSZAR22M50
T206	IFT	CTE-149	C158, 159		CKSYB183K50
CF51, 52	Ceramic Filter	CTF-217 or CTF-152	C201		CKSYB103K50
			C203		CKSYB272K50
CF201	Filter	CTF-100 or CTF-240	C204, 212, 223		CKSYF473Z50
CR101		CWW-107	C206		CCSSH181J
TC201, 202	Trimmer	CCG-087	C207		CCSPH121J
★★ VR151	Semi-fixed, 15 kΩ(B)	CCP-246	C208, 214		CKSYB222K50
			C210, 215, 259, 260		CKSYB223K50
★★ VR451, 452	Volume, 50 kΩ(B) (BASS, TREBLE)	CCS-401	C213		CEA221M16LS
★★ VR453/S1	Volume/Switch, 20 kΩ(B), 50 kΩ(G), (VOLUME, BALANCE/	CCS-400	C216	0.47 μF/50 V (NP)	CEAR47M50LS2
			C217		CCH-108
			C219		CEA220M16LS
			C220		CEA4R7M35LS
★★ S2, 4 – 6	TUNER POWER) Switch (MONO, METAL, NS, LOUD)	CSG-207	C221		CKSYB333K25
★★ S3	Switch (BAND)	CSG-246	C224		CCPCH1R8M50
X151	Ceramic Resonator	CSS1019	C251, 252		CKSYB471K50
			C253, 254		CEANL4R7M35LL
			C255, 256		CEA470M16LS
★★ IL601	Lamp, 14 V 40 mA	CEL-154	C263		CEA221M16L2
			C451 – 454, 463, 464		CEA4R7M35LS
			C455 – 458		CKPYX182M16
			C459, 460		CKSYB333K25
			C461, 462		CCSSL330J50

RESISTORS

Mark	Symbol & Description	Part No.
R52, 60, 67, 211, 470	RD1/4PM□□□J	C465, 466
R63, 154, 202, 210, 901, 905	RS1/8S□□□J	C467, 468
Other Resistors	RD1/4PS□□□JL	C469
		C470
		C601, 602

CAPACITORS

Mark	Symbol & Description	Part No.
C51 – 53, 58 – 61, 65	CKSYB223K50	C603, 604
C54	CKSYF473Z50	C605
C55	CEA221M16L2	C607
C56, 69	CEA010M50LS2	C608
C57	CEA4R7M35L2	C610
C62, 67	CCPSL330J50L	CEA4R7M35LS
C63, 68	CEAR47M50LS2	CEA470M16L2
C64	CKSYB103K50	CEA100M16LS2
C66	CKPYB101K50L	CEA221M16L2
C70	CEA4R7M35NPLL	CKSYF473Z50
C101, 102, 257, 258, 261, 262	CKSYB103K50	
C103, 211, 218, 255, 256, 471,	CEA470M16LS	
472		
C104	CKSYB182K50	
C105	CEA470M16L2	

Tuner P.C. Board (KPH-4120SDK/WG)

MISCELLANEOUS

Mark	Symbol & Description	Part No.
★★ IC51		LA1140B
★★ IC101		LA2110
★★ IC151		LA3430P
★★ IC201		LA1130
★★ IC251		M51522AL
★★ IC451		TA75558P
★★ IC701		LA2220
★★ IC751		LA2211
★★ Q51, 52, 605, 751, 755 – 757		2SC2458 or 2SC1740S

KPH-4130/KPH-4120/KPH-4120SDK

Mark	Symbol & Description	Part No.	CAPACITORS		
Mark	Symbol & Description	Part No.			
★ ★ Q451		2SC2458 or 2SC536SP	C51 – 53, 58 – 61, 65, 210, 215	CKSYB223K50	
★ ★ Q453		2SC2634NC	C54	CKSYF473Z50	
★ ★ Q601 – 604		2SD1468S	C55, 213	CEA221M16L2	
★ ★ Q606		2SC3422	C56, 69	CEA010M50LS2	
★ ★ Q701		UN4223 or DTC114ES	C57	CEA4R7M35L2	
★ ★ Q702, 752		2SC3113	C62, 67	CCPSL330J50L	
★ ★ Q753, 754		2SD1468S or 2SD1012	C63, 68, 216	CEAR47M50LS2	
★ D151 – 153, 201, 203, 204, 253, 602 – 604, 607, 608, 701, 702, 751, 752		US1040M or ISS133 or ISS176	C64, 257, 258, 261, 262	CKSYB103K50	
★ D202		RD6R8ESB2 or MTZ6R8JB	C66	CCSSL101J50	
★ D451, 605		RD9R1ESB2 or MTZ9R1JB	C101, 102	CKSYB103K50	
★ D601		RD8R2JSB2 or MTZ8R2JC	C103, 211, 218, 255, 256	CEA470M16LS	
★ D606		RD5R6ESB1 or MTZ5R6JA	C104	CKSYB182K50	
★ D753		ERA15-02VH	C105	CEA470M16L2	
L51, 52	Inductor	LAU150K	C151, 204, 212, 223	CKSYF473Z50	
L201	Ferri-Inductor	LAU5R6K	C152	CKSYB332K50	
T51	Coil	CTC1008			
T203	Coil	CTB-146			
T205	Coil	CTE-150			
T206	IFT	CTE-149			
CF51	Ceramic Filter	CTF-217 or CTF-152	C153, 259, 260	CKSYB223K50	
CF201	Filter	CTF-100 or CTF-240	C154	CKSYB153K50	
CR101		CWW-107	C155	CEA3R3M50LS	
TC201, 202	Trimmer	CCG-087	C156	CEA010M50LS2	
★ ★ VR151	Semi-fixed, 15 kΩ	CCP-246	C157	CSZAR22M50	
★ ★ VR451, 452	Volume, 50 kΩ(B), (BASS, TREBLE)	CCS-401			
★ ★ VR453/S1	Volume/Switch, 20 kΩ(B), 50 kΩ(G), (VOLUME, BALANCE/	CCS-400	C158, 159	CKSYB183K50	
TUNER POWER)			C201	CKSYB103K50	
★ ★ VR701	Semi-fixed, 220 Ω(B)	CCP-235	C203	CKSYB272K50	
★ ★ VR751	Semi-fixed, 4.7 kΩ(B)	CCP-243	C206	CCSSH181J50	
★ ★ S2, 4 – 6	Switch (MONO, METAL, NS, LOUD)	CSG-207	C207	CCSPH121J50	
★ ★ S3	Switch (BAND)	CSG1002			
X151	Ceramic Resonator	CSS1019	C208, 214	CKSYB222K50	
X701	Ceramic Resonator	CSS1002	C217	0.47 μF/50 V (NP)	CCH-108
★ ★ IL601	Lamp, 14 V 40 mA	CEL-154	C219	CEA220M16LS	
RESISTORS			C220, 453, 454, 463, 464	CEA4R7M35LS	
Mark	Symbol & Description	Part No.	C221	CKSYB333K25	
R52, 60, 67, 211, 470		RD1/4PM□□□J			
R63, 103, 152, 202, 701, 702, 706, 766, 904, 905		RS1/8S□□□J	C224	CCPCH1R8M50L	
Other Resistors		RD1/4PS□□□JL	C251, 252	CKSYB471K50	
			C253, 254	CEANL4R7M35LL	
			C263	CEA221M16L2	
			C455 – 458	CKPYX182M16L	
			C459, 460	CKSYB333K25	
			C461, 462	CCSSL330J50	
			C465, 466	CEAR33M50LS2	
			C467, 468	CKSYB272K50	
			C469	CEA101M10L2	
			C470, 710, 716	CEA100M16LS2	
			C471, 472	CEA470M16LS	
			C601, 602	CKSYB152K50	
			C603, 604, 712 – 715, 751, 762, 763	CEA4R7M35LS	
			C605	CEA330M16LS	
			C607	CEA100M16LS2	
			C608	CEA221M16L2	
			C610	CKSYF473Z50	
			C701, 703	CEA470M16LS	
			C702	CQMA683J50LL	
			C704	CQMA222J50LL	
			C705, 706	CQMA102J50LL	
			C707, 752	CEA101M16L2	
			C708	CEA2R2M50LS2	

KPH-4130/KPH-4120/KPH-4120SDK

Mark	Symbol & Description	Part No.
C709		CKSYF473Z50
C711		CEA010M50LS2
C753		CSZAR22K35
C754 - 757		CEA4R7M16NPLL
C758, 759		CEA101M6R3LS
C760		CEA010M50LS2
C761		CEA100M16LS2

Amp Unit

MISCELLANEOUS

Mark	Symbol & Description	Part No.
★★ IC551, 552		MB3732
★ D581, 582		ERA15-02VH
L581	Choke Coil	CTH-083
RY581	Relay	CSR-052

RESISTORS

Mark	Symbol & Description	Part No.
R581		RD1/2PS560JL
Other Resistors		RD1/4PS□□□JL

CAPACITORS

Mark	Symbol & Description	Part No.
C551, 552, 581		CEA100M50L2
C553, 554		CEA221M6R3L2
C555, 556		CEA102M16L2
C557 - 560, 585		CQMA224J50L
C584 (KPH-4120SDK/WG)		CCG-081
C585		CQMA104K50L

Trimmer Unit

MISCELLANEOUS

Mark	Symbol & Description	Part No.
L1	Ferri-Inductor	LAU4R7K
TC1	Trimmer	CCG-090

LED Unit

Mark	Symbol & Description	Part No.
★ D901, 902	LED (DIRECTION)	LN31C
★ D903	LED (SK) (KPH-4120SDK/WG)	LN41C
★ D904	LED (STEREO)	LN21C

P.C. Board Unit

Mark	Symbol & Description	Part No.
★★ S1	Switch (FWD/REV)	ESH1001

Switch P.C. Board

Mark	Symbol & Description	Part No.
★★ S1, 2	Switch (MUTE, MOTOR)	ESN1001
★★ S3	Switch (TAPE/TUNER)	HSK-126

Miscellaneous Parts List

Mark	Symbol & Description	Part No.
★★ HD1	Head	EPB1001
★★ M	Motor Unit	EXA1013
	Front End (KP-4130/EW, KP-4120/EW,ES)	CWB1015
	Front End (KP-4120SDK/WG)	CWB1016